



COPY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
4601 N. Monroe Street • Spokane, Washington 99205-1295 • (509) 456-2926

May 14, 2003

County Auditor
Pend Oreille County
P.O. Box 5000
Newport, WA 99156-5000

Dear Sir or Madam:

Enclosed is Certificate of Water Right No. G3-29919C and a check in the amount of \$24.00 to cover the cost of recording.

After recording, please forward the Certificate to:

Fairchild Air Force Base
Cusick Survival school
92 CES/CEV
100 W. Ent Street, Ste 100
Fairchild AFB, WA 99011-9404

Sincerely,

Cindy A. Christian

Cindy A. Christian
Water Resources Program

CAC:mjw
Enclosures

cc: Fairchild Air Force Base, Cusick Survival school



Fairchild Air Force Base
Cusick Survival School
92 CES/CEV
100 W. Ent St. Ste 100
Fairchild AFB, WA 99011-9404



**STATE OF WASHINGTON
CERTIFICATE OF WATER RIGHT**

WASHINGTON STATE
DEPARTMENT OF
ECOLOGY

Document Title: Certificate of Water Right

Agency: Department of Ecology
Eastern Regional Office
4601 North Monroe
Spokane, WA 99205-1295

Applicant: Fairchild Air Force Base
Cusick Survival School
92 CES/CEV
100 W. Ent Street, Ste 100
Fairchild AFB, WA 99011-9404

Reference Number:

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
August 22, 1995	G3-29919	G3-29919	G3-29919

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown, but is limited to an amount actually beneficially used.

PUBLIC WATERS TO BE APPROPRIATED

SOURCE	TRIBUTARY OF (IF SURFACE WATERS)	
a well		
MAX. CUBIC FEET PER SECOND	MAX. GALLONS PER MINUTE	MAX. ACRE-FEET PER YEAR
	23	48

QUANTITY/TYPE OF USE/PERIOD OF USE

23 gallons per minute, 48 acre feet per year, continuously, for multiple domestic supply.

LEGAL DESCRIPTION OF LOCATION OF DIVERSION/WITHDRAWAL

1/4 1/4 NE 1/4 NW 1/4	SECTION 27	TOWNSHIP N. 34	RANGE (E. OR W.) W.M. 43 E.	W.R.I.A. 62	COUNTY Pend Oreille
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PARCEL # N/A

ADDITIONAL LEGAL IS ON PAGE 2

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

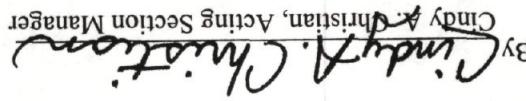
1/4 1/4 NE 1/4 NW 1/4	SECTION 27	TOWNSHIP N. 34	RANGE (E. OR W.) W.M. 43 E.	W.R.I.A. 62	COUNTY Pend Oreille
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PARCEL # N/A

ADDITIONAL LEGAL IS ON PAGE 2

Certificate

ECY 040-1-2 (Rev. 8-97)

DATA REVIEW
OK 

G3-29919

2

By

Cindy Christian

Acting Section Manager

Department of Ecology
Tom Fitzsimmons

Given under my hand and the seal of this office at Spokane, Washington,
this 14th day of May, 2003.

This superseding certificate of water right is specifically subject to relinquishment for non-use of
water as provided in Chapter 90.14 RCW.
The right to use of the water aforesaid hereby confirmed is restricted to the lands or place of use
herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.100.

An access port, airline and pressure gauge shall be properly installed and maintained in
working order.

All water wells constructed within the State shall meet the minimum standards for
construction and maintenance as provided under RCW 18.104 (Washington Water Well
Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for
Construction and Maintenance of Water Wells).
Nothing in this authorization shall be construed as satisfying other applicable federal, state,
or local statutes, ordinances, or regulations.

This authorization to make use of public waters of the State is subject to existing rights,
including any existing rights held by the United States for the benefit of Indians under
treaty or otherwise.

The amount of water granted is a maximum limit that shall not be exceeded and the water
user shall be entitled only to that amount of water within the specified limit that is
beneficially used and required.

An approved measuring device shall be installed and maintained in accordance with RCW
90.03.360 and/or WAC 508-64-020 through WAC 508-64-040.

All conditions and requirements contained in reports of examination or permits previously issued apply to
this superseding certificate unless specifically noted below.

PROVISIONS

NE 1/4 NW 1/4 of Sec. 27, T. 34 N., R. 43 E. W.M.

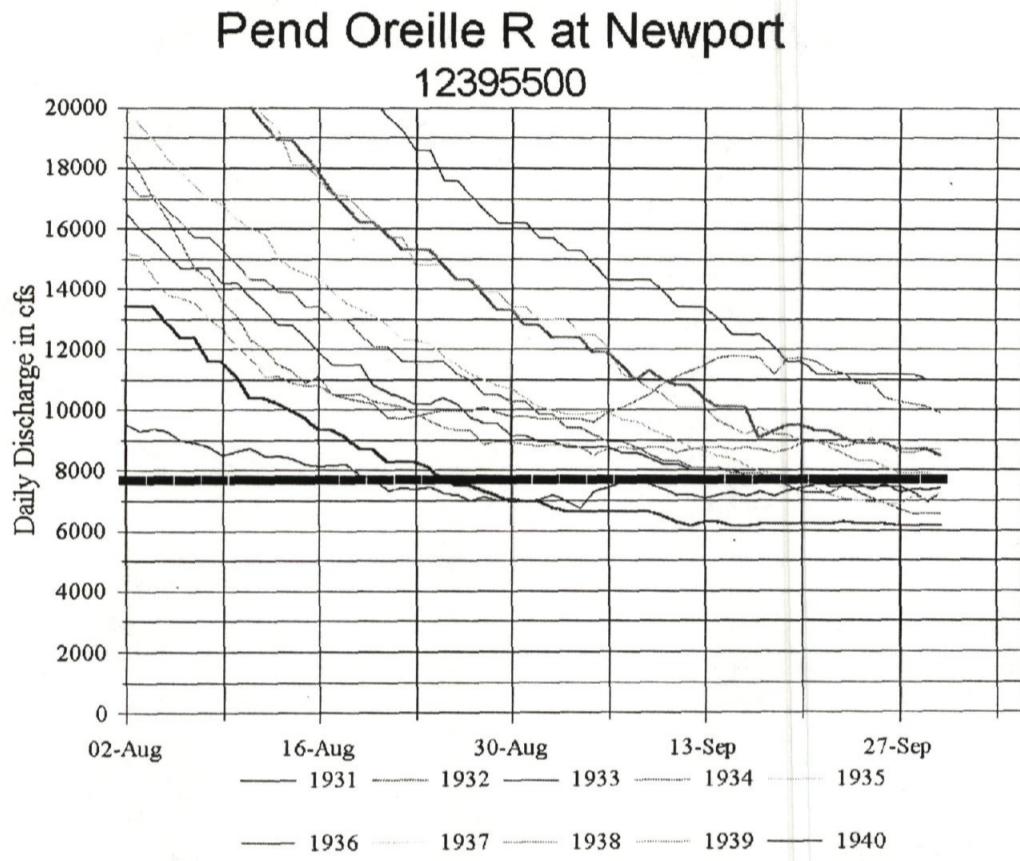
CONTINUED LEGAL DESCRIPTION FOR PROPERTY ON WHICH WATER IS TO BE USED

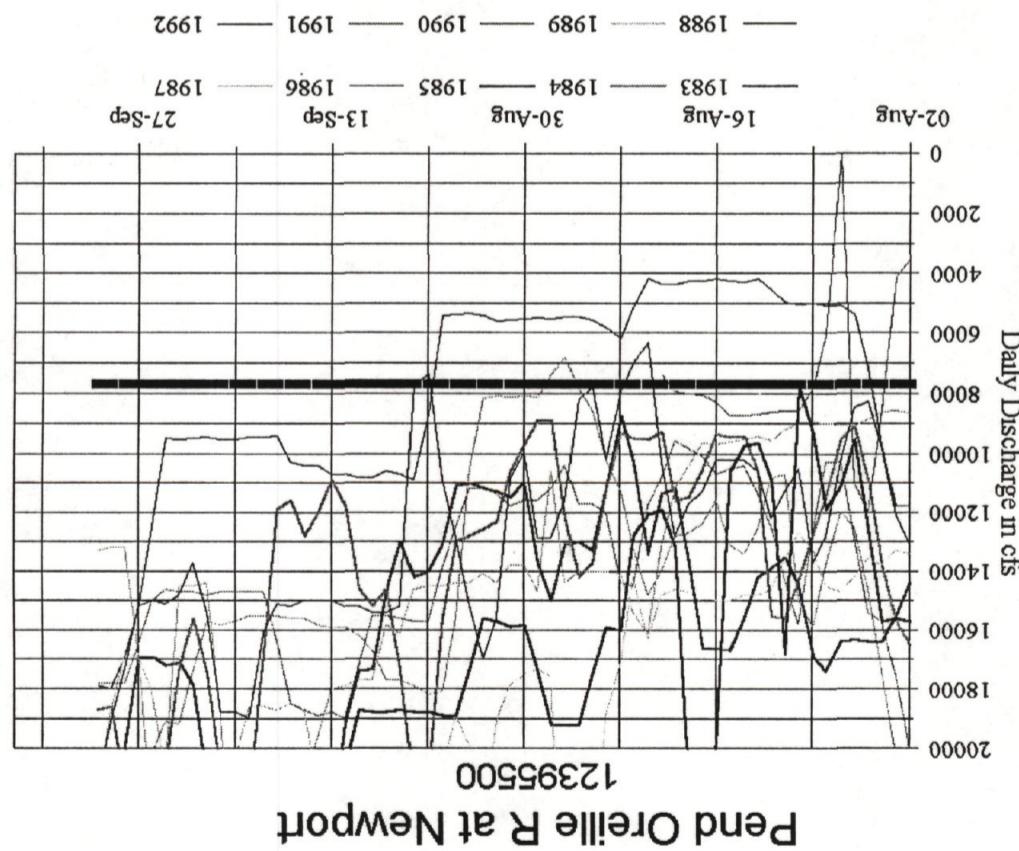
2376 feet east and 1056 feet south from the NW corner of Sec. 27

CONTINUED LEGAL DESCRIPTION FOR LOCATION OF DIVERSION/WITHDRAWAL

The Washington State Department of Fish and Wildlife (WDFW), has recommended that water rights from the Pend Oreille River be conditioned with instream flows of 7,700 cubic feet per second (cfs) on a year-round basis (as measured at the gage near Newport, Washington).

The following hydrographs for the U.S.G.S. Gage on the Pend Oreille River at Newport, Idaho (12395500) demonstrate important hydrologic characteristics of the Pend Oreille River. Before the construction of the Albeni Falls Dam, the river exhibited normal, riverine flow conditions. The first hydrograph shows the typical late summer flow regime for 10 different water years in the 1930s and early 1940s. The solid line at 7700 cfs represents WDFW's recommended instream flow value as it would have applied to the river in the 1930s. When summer flows reached their baseflow, they tended to stay down at that level for the remainder of the water year.



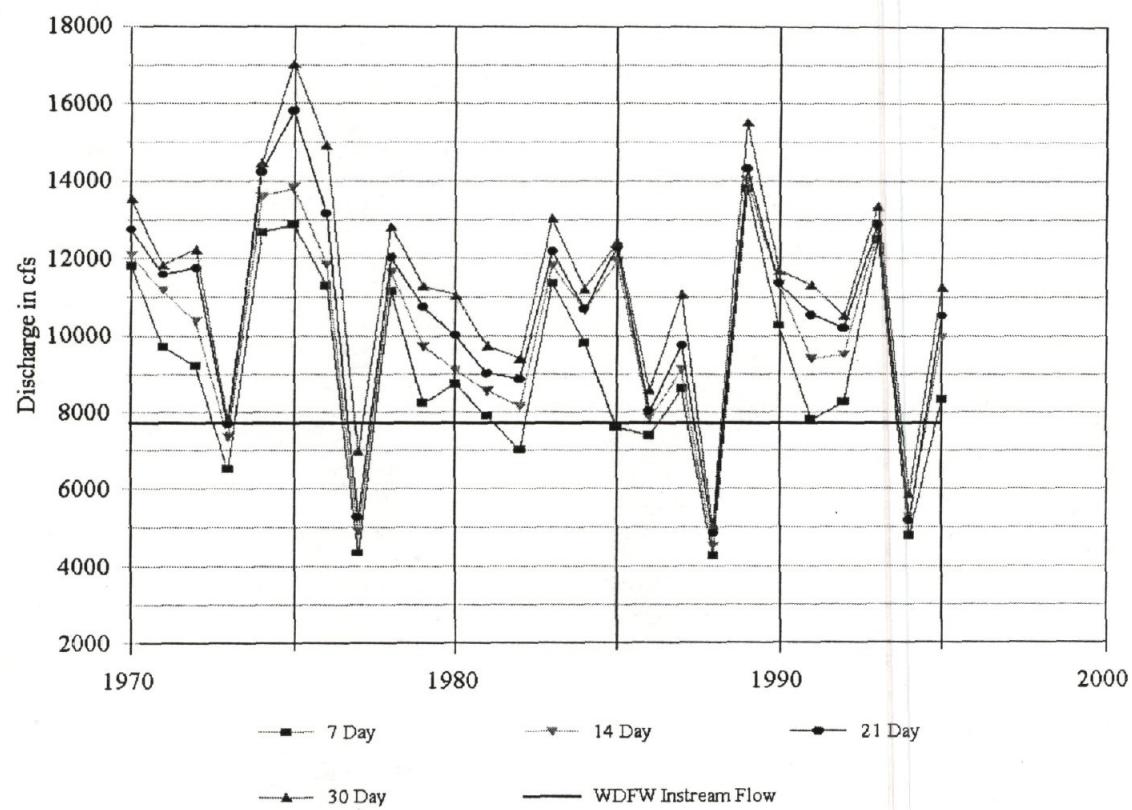


Penobscot River at Newport

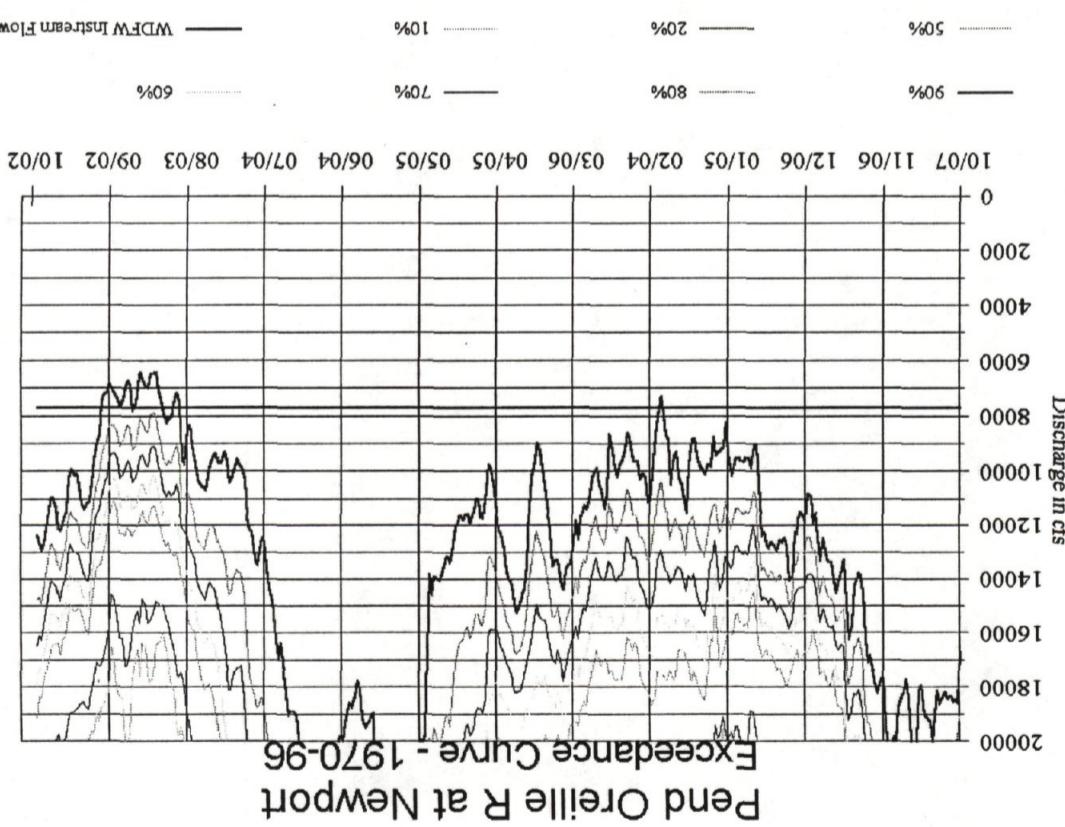
With the construction of the Albemarle Falls dam in 1952, the character of the daily discharge changed dramatically from a riverine regime to an impounded, highly regulated, flow regime. The next hydrograph depicts the late summer, daily average discharge for a ten-year period in the 1980s through the early 1990s. The highly variable discharge data reflects the flows that result from the power generation demands that are placed on the river.

Trying to devise a methodology to implement the WDFW recommended instream flow given the current flow regime of the river requires some careful consideration of the day-to-day variability of the discharge. Given its fluctuations, just simply regulating junior water rights every time the daily average flow drops below 7700 cfs (the recommended instream flow) would be inappropriate and unworkable. Examining the data in the hydrograph indicates that the day-to-day variability is on the order of 5,000 cfs. Looking at a suite of duration frequency low flow analyses (7-day, 14-day, 21-day, and 30-day) for the 1970 through 1996 period allows us to get a better handle on when the flow in the river is truly flowing at a rate that is below the recommended instream flow. By looking at the actual daily flow data, we can see that three water years during the period 1970 – 96 exhibited sustained, low flow periods that were lower than the 7700 cfs threshold (1977, 1988, and 1994). The data from the duration frequency analysis shows that using a 14-day low flow criteria gives us the best opportunity to identify the low flow events.

Pend Oreille River Low Flow Analysis



The Pend Oreille River falls below 7700 cfs (as measured at the Pend Oreille River at Newport gauge) as recommended by WDFW. Therefore, this permit shall be conditioned that all diversion shall cease when the 14-day average flow in



Calculating the exceedance probability for the daily average flows for the period 1970 - 96 allows us to see how frequently (on a yearly basis) and for what duration (how many weeks during each year) the flows on the Pend Oreille River can be expected to be below the recommended instream flow. The following graph demonstrates that on average, we can expect the summer low flows in the Pend Oreille River will be above the instream flow 8 to 9 times out of ten years. During that one in ten year event when the flow in the river is below the recommended flow, the low flow will last for approximately one month (typically August).